



Homeland Security

Naval-Industry R&D Partnership Conference 2004

The Role of the Homeland Security Advanced Research Projects Agency

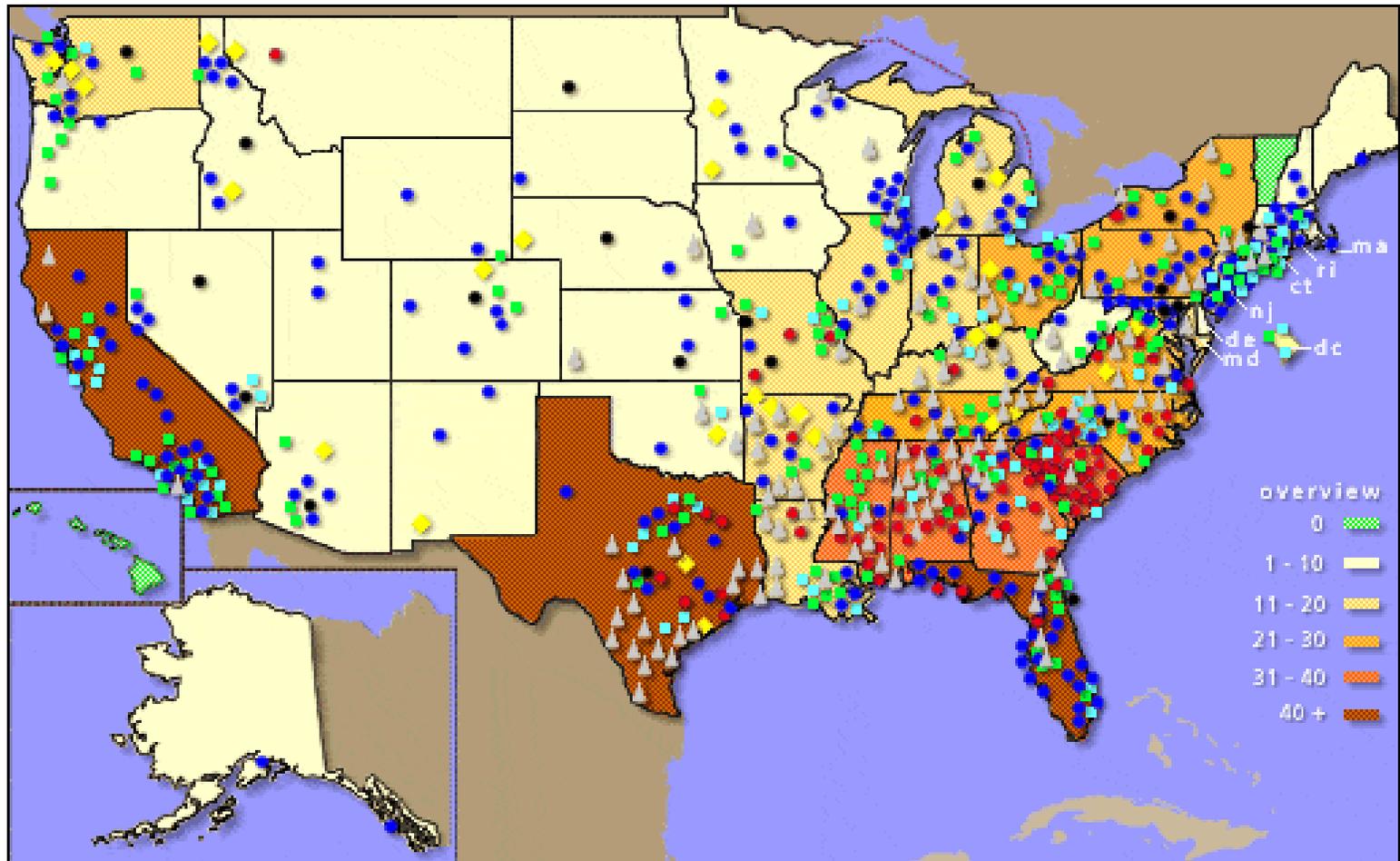
August 4, 2004

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Hate Groups in the USA



Courtesy Southern Poverty Law Center

www.splcenter.org



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2004 Naval-Industry R&D Partnership, Homeland Security

4 August 2004

3

Aryan Nation

- Skinheads



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Timothy McVeigh – Oklahoma City



Osama bin Laden – World Trade Center



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2004 Naval-Industry R&D Partnership, Homeland Security

4 August 2004

Kamikaze - 1945



Potential Targets of Terrorism

CIVILIANS

ALLIES



Technology Strategy



- **DOD**
 - “Train as you fight... fight as you train”
- **DHS**
 - Deal with emergency using strengths built to handle everyday missions



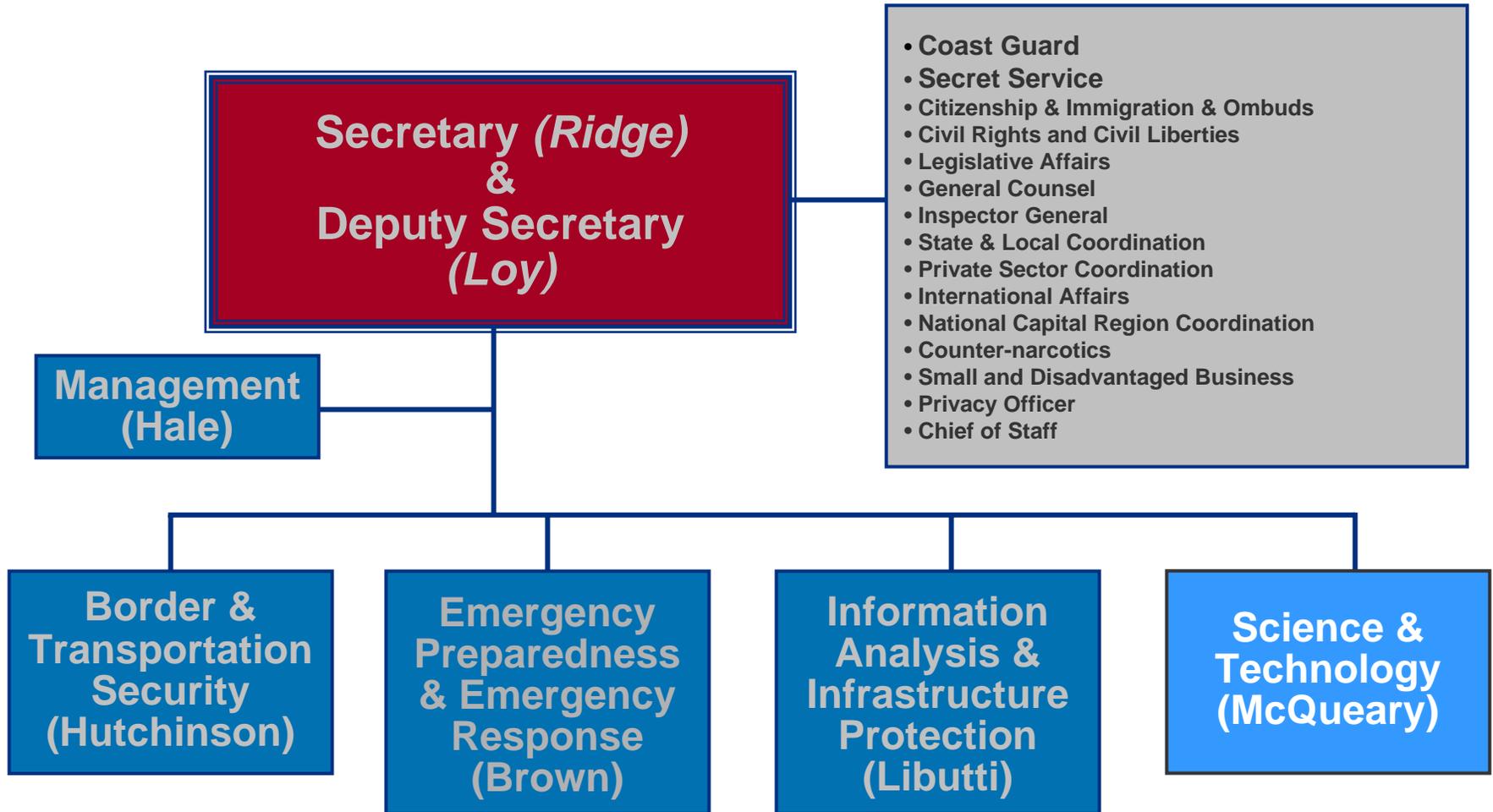
DHS Metrics for Success



- **Protect the United States**
 - Lives of our citizens
 - Critical infrastructure
- **Protect the economic welfare of the United States**
 - Protect from destruction
 - Not cause economic harm to ourselves
 - Creating economic success is industry's role
- **Preserve quality of life**



General DHS Organization



Science and Technology (S&T) Mission

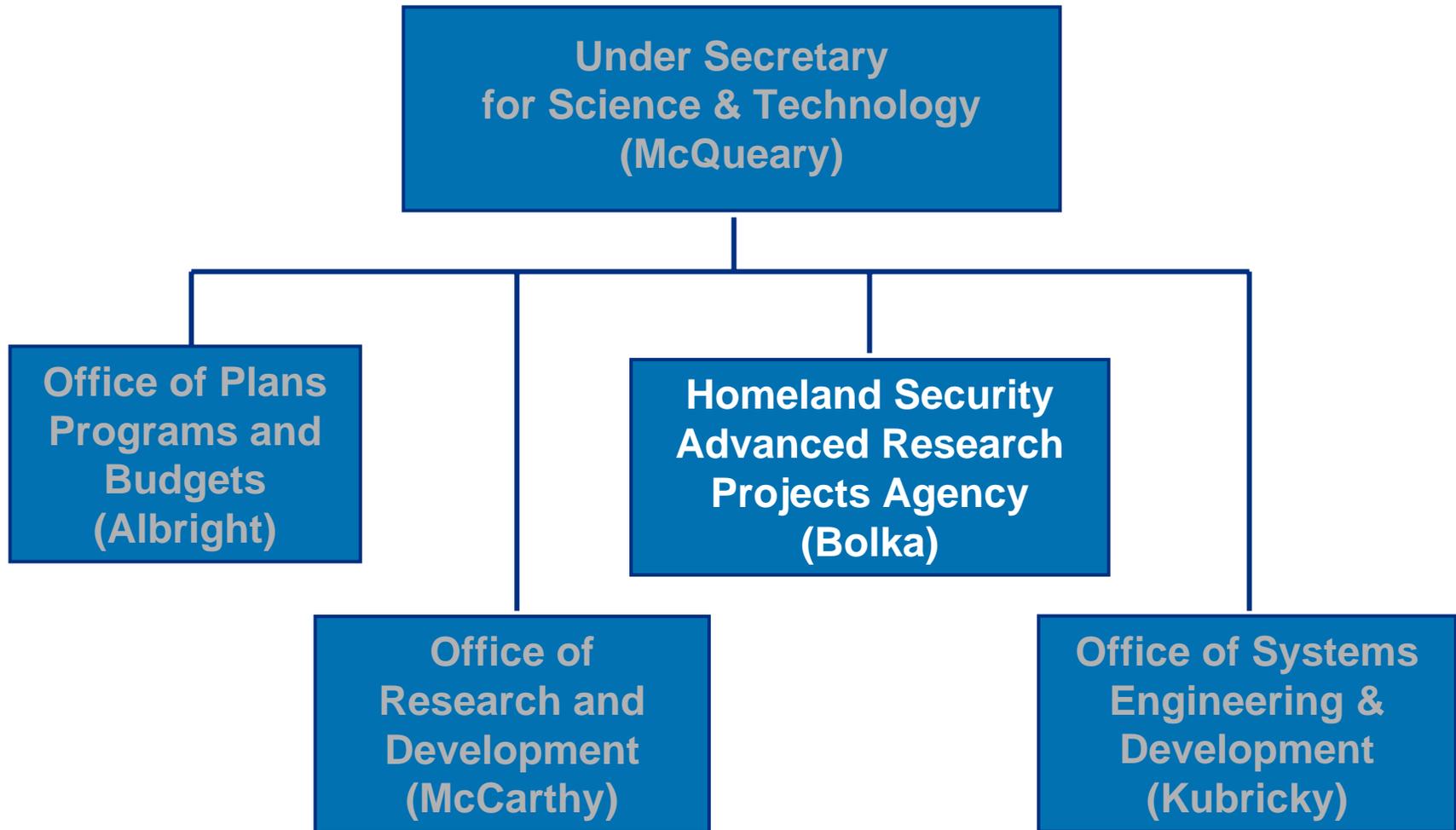


Conduct, stimulate, and enable research, development, test, evaluation and timely transition of homeland security capabilities to federal, state and local operational end-users.



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S&T Organization



Crosscutting Portfolio Areas



- Chemical
- Biological
- Radiological
- Nuclear
- High Explosives
- Cyber defense

(CBRNE Cyber)



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Customer Specific Portfolios



- **Critical Infrastructure Protection**
- **Borders and & Transportation Security**
- **Emergency Preparedness and Response**
- **US Coast Guard**
- **US Secret Service**
- **State & Local Responders**
- **Threat & Vulnerability, Testing & Assessment**



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R&D Priorities

- Provide state-of-the-art, high performance, low operating cost systems to **detect rapidly and mitigate the consequences of the release of biological and chemical agents.**
- Develop and deploy state-of-the-art, high performance, low operating cost systems to **prevent the illicit traffic of R/N materials and weapons** into and within United States.
- Provide state-of-the-art, high performance, low operating cost systems to **detect illicit high explosives** transit into and within the United States.
- **Enhance the conventional missions** of all DHS operational units through targeted RDT&E and systems development and engineering.
- Develop and provide capabilities for **protecting cyber and other critical infrastructures.**
- Develop capabilities to **prevent technology surprise** by anticipating emerging threats.



DHS Systems Characteristics



- Near zero false WMD positives at the system level
- Affordability is a performance characteristic;
 - “If it’s not affordable...zero performance”
- System matches regional needs
 - Tailored to existing vulnerabilities, governments, methods of operations and legacy systems
- Cannot mandate Federal solutions



Execution

Science and Technology Directorate

Office of
Research
and
Development

Homeland Security
Advanced Research Projects
Agency

Systems
Engineering
&
Development

**PUBLIC
SECTOR**

**PRIVATE
SECTOR**



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ORD Goals



- **Provide the nation with an enduring RDT&E capability**
- **Provide stewardship for the homeland security science and technology complex**
- **Preserve and broaden U.S. leadership in science and technology**



SE&D Goals



- **Develop systems context for solutions**
- **Conduct rapid full-scale development**
- **Conduct acceptance testing**
- **Transition to production and deployment**



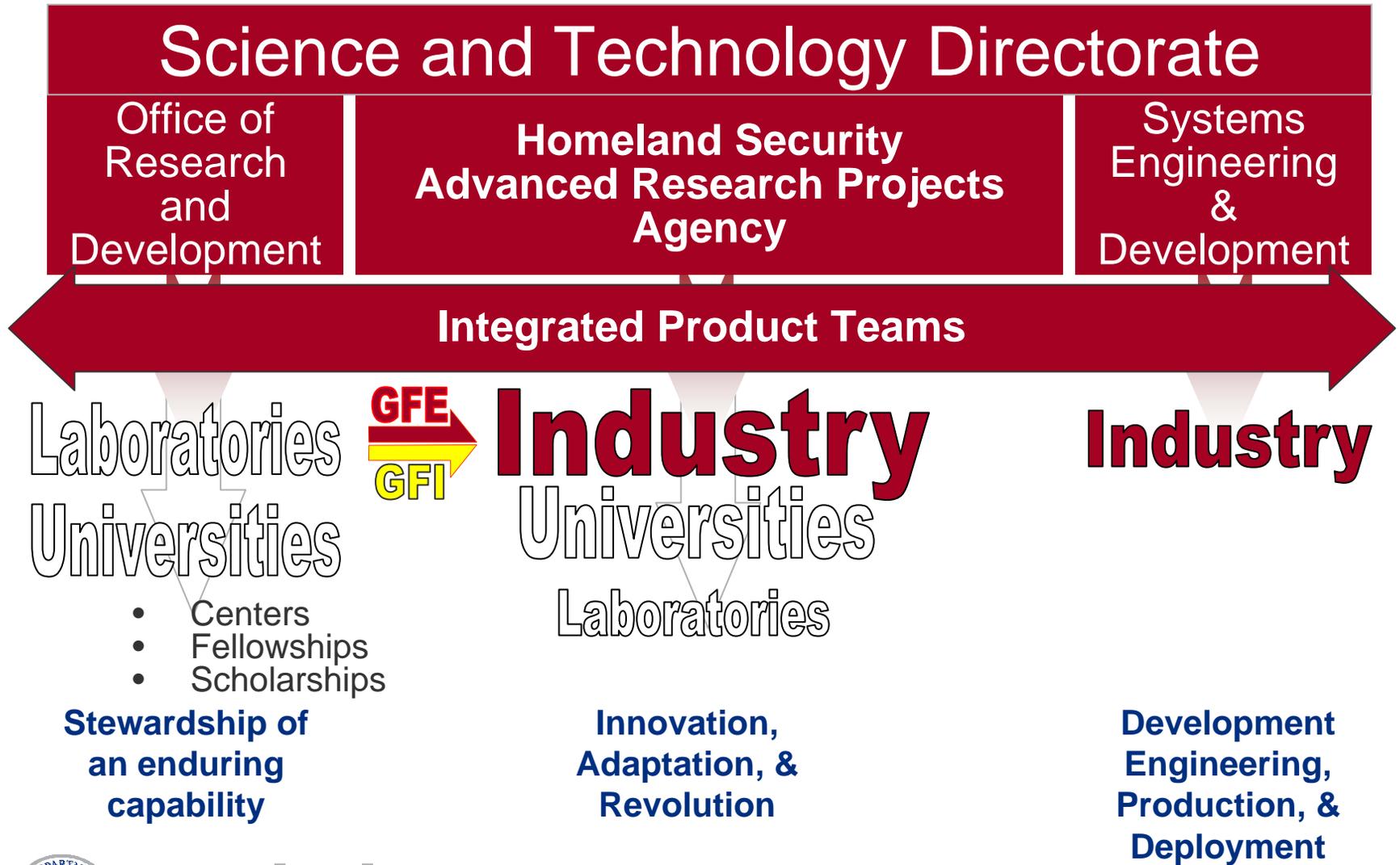
HSARPA Mission



- **Satisfy operational needs**
- **Conduct rapid prototyping and commercial adaptation**
- **Research revolutionary options**



Execution



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HSARPA Vision



- Long-term, robust R&D management organization
- Sustainable organization structure
- Technically excellent Program Managers
 - Process-driven program management
- Personnel refresh
- Nurture private sector relationships
 - Transfer technology from government to industry



Legacy of HSARPA Name

How is it like DARPA?

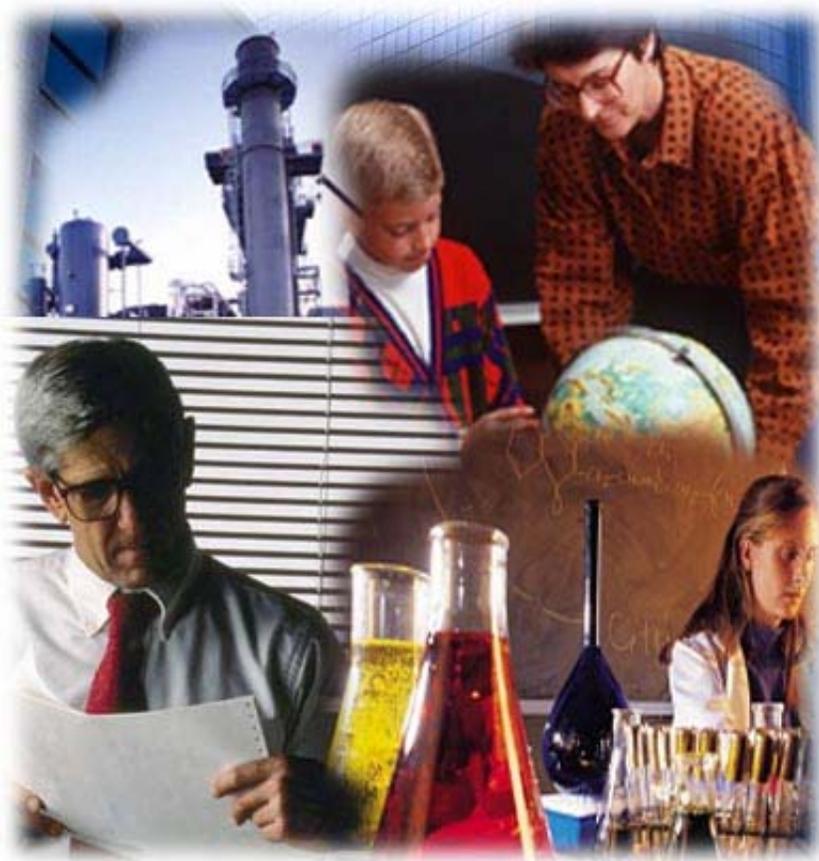


- Program Manager owns program
- Active technical leadership of program
- Full range of contracting vehicles
- Common technology base with DoD



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Program Managers



- **GS-15 level term (5) (2)**
 - **IPA (5) (1)**
 - **Paid Detailees (1) (1)**
 - **§ 1101 Special Government Hiring Authority (3) (1)**
-
- **Small and large business (3)**
 - **Academia (3)**
 - **Different Government: DoD, DoE, NIJ (7)**
 - **Near Term to “out-of-the-box” DARPA (2)**
 - **Not for Profit (2)**

(N) – on-board
(N) – incoming



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Legacy of HSARPA Name

How is it unlike DARPA?



- **No ‘Service’ R&D organization in DHS**
- **Rapidly filling current technology “holes”**
- **Customers unfamiliar with dedicated R&D capability/organization**
- **Will evolve to more revolutionary R&D**



S&T Funding (\$M)

	<u>FY 04</u>	<u>FY 05</u>
Total for R&D - - - - -	874.0	986.7
Biological Countermeasures	198.5	372.0
National Biodefense Center (NBACC)	88.0	35.0
Radiation/Nuclear C/M	127.0	129.3
Chemical C/M	52.0	53.0
High Explosives C/M	9.5	9.7
Threat Assessment, etc.	75.5	77.9
Cyber-Security	18.0	18.0
Critical Infrastructure Protection	6.5	6.0
Support to Components	34.0	34.0
Rapid Prototyping	75.0	76.0
Standards	39.0	39.7
Emerging Threats	21.0	21.0
Counter-MANPADS	60.0	61.0
University/Fellowship Programs	70.0	30.0
Transfers from other DHS Components	0.0	24.1

*President's
Budget*



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HSARPA Progress - 1

- **CLOSED Solicitations:**
 - **RA03-01 Detection Systems for Biological and Chemical Countermeasures (DSBCC)**
 - **BAA 04-01 Radiological and Nuclear Countermeasure System Architectures Analysis**
- **Past Workshops**
 - **Countering Threats from Truck, Suicide and Public Transportation Bombs**
 - **Detection of Low Vapor Pressure Chemicals**
 - **Academia Day**
 - **Industry Day**



HSARPA Progress - 2

- **Active Solicitations**
 - **BAA 04-02 Detection Systems for Radiological and Nuclear Countermeasure**
 - **BAA 04-03, Bioinformatics and Assays Development Program**
 - **BAA 04-05, Automated Scene Understanding**
 - **BAA 04-06 Advanced Container Security Device**
- **Current Workshops and Drafts**
 - **BAA 04-10 Low Vapor Pressure Chemicals Detection Systems Program**
 - **BAA 04-18 Instantaneous Bio-Aerosol Detector Systems**



HSARPA Progress

- **Some Upcoming FY 2004 Solicitations and Workshops**
 - Novel Personal Protection Equipment (PPE) (BAA)
 - Cyber - Software Engineering, Wireless, Forensics BAA
 - Secure Protocols for Routing Infrastructure (Existing BAA)
 - Workshop September 2004
 - Near Term Prototypes BAA
 - Future Technologies BAA



Solicitation Information



Homeland Security Advanced Research Projects Agency
Solicitations and Teaming Portal

HSARPA SOLICITATIONS

- [Home](#)
- [Current Solicitations](#)
 - [BAA 04-02 Detection Systems for Radiological and Nuclear Countermeasure](#)
 - [BAA 04-03, Bioinformatics and Assays Development Program](#)
 - [BAA 04-05, Automated Scene Understanding](#)
 - [BAA 04-06 Advanced Container Security Device](#)
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 - [Academia Day](#)
 - [Industry Day](#)
- [HSARPA SBIR Site](#)
- [HSARPA Mailing List](#)
- [Privacy Policy](#)
- [Website Technical Help](#)

HSARPA R&D funding opportunities:

www.fedbizopps.gov

www.fedgrants.gov

www.dhs.gov

www.hsarpabaa.com

www.hsarpasbir.com



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Conclusion



- **Together we can make a difference to increase homeland security**





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